

## WHAT IS CLAIMED IS:

1. A power supply circuit for supplying a voltage to a load, comprising:

a power supply operable to generate a predetermined voltage;

an electrical path operable to electrically connect said power supply and said load to each other;

a current draw unit operable to draw a current from said electrical path; and

a current control unit operable to control the current drawn by said current draw unit from said electrical path based on a voltage received by said load.

2. A power supply circuit as claimed in claim 1, wherein said current draw unit connects to said electrical path to be in parallel to said load.

3. A power supply circuit as claimed in claim 2, further comprising a first current change unit, provided in said electrical path between said current draw unit and said load to be in parallel to said load, operable to supply a current to said electrical path in a case where a current received by said load increased and draw a current from said electrical path in a case where the current received by said load decreased.

4. A power supply circuit as claimed in claim 3, wherein said first current change unit is a capacitor.

5. A power supply circuit as claimed in claims 2, wherein

an inductance component of said electrical path between said power supply and said current draw unit is larger than an inductance component of said electrical path between said current draw unit and said load.

6. A power supply circuit as claimed in claim 1, wherein said current control unit makes the current drawn by said current draw unit from said electrical path substantially zero in a case where the voltage received by said load became lower than a predetermined voltage.

7. A power supply circuit as claimed in claim 1, wherein said current control unit makes the current drawn by said current draw unit from said electrical path to be a predetermined current value in a case where the voltage received by said load became higher than a predetermined voltage.

8. A power supply circuit as claimed in claim 1, further comprising a second current change unit, provided in said electrical path between said power supply and said current draw unit to be in parallel to said current draw unit, operable to supply a current to said electrical path in a case where the current drawn by said current draw unit increased and draw a current from said electrical path in a case where the current drawn by said current draw unit decreased.

9. A power supply circuit as claimed in claim 8, wherein said second current change unit is a capacitor.

10. A power supply circuit as claimed in claim 9, wherein

said capacitor serving as said second current change unit has a larger capacity than said capacitor serving as said first current change unit.

11. A power supply circuit as claimed in claim 1, wherein said electrical path includes:

a first coil arranged between said power supply and said current draw unit; and

a second coil arranged between said current draw unit and said load, said second coil having a smaller inductance than said first coil.

12. A power supply circuit as claimed in claim 1, wherein said current draw unit includes a MOS-FET.

13. A power supply circuit as claimed in claim 12, wherein a drain terminal of said MOS-FET is connected to said electrical path, while a source terminal thereof is grounded.

14. A power supply circuit as claimed in claim 13, further comprising a driving unit operable to drive said MOS-FET in a saturation current region.

15. A power supply circuit as claimed in claim 14, further comprising a unit operable to apply a voltage to a gate terminal of said MOS-FET based on a drain voltage at said drain terminal of said MOS-FET.

16. A testing device for testing an electronic device, comprising:

a pattern generator operable to generate a test pattern for testing said electronic device;

a determination unit operable to determine whether said electronic device is defective or not based on an output signal said electronic device outputs based on said test pattern; and

a power supply circuit operable to supply power for driving said electronic device to said electronic device, wherein said power supply circuit includes:

a power supply operable to generate a predetermined voltage;

an electrical path operable to electrically connect said power supply and said electronic device to each other;

a current draw unit operable to draw a current from said electrical path; and

a current control unit operable to control the current drawn by said current draw unit from said electrical path based on a voltage received by said electronic device.